TENNESSEE MINI CASE STUDY
March 2009

Introduction

In November 2008, eleven states were invited by the *Lumina Foundation for Education* to participate in a learning year to focus on higher education productivity. Known as the *Opportunity Grant Program* (OGP), the selected states are currently pursuing a range of goals they have developed to support productivity during the year concluding October 2009. *Social Program Evaluators and Consultants* (SPEC), as the program evaluator for *Lumina's Making Opportunity Affordable* (MOA) initiative, produced these mini case studies for the eleven OGP states to compliment the learning year. These mini case studies are intended to help MOA understand the context for each state's engagement in increasing its productivity and to serve as a future reference in evaluating MOA's impact.

This mini case study is not intended to weigh policy options nor is it intended to be evaluative of any OGP state's current efforts. Other recent publications, including *Measuring Up 2008*, already have explored those issues. Rather, these mini case studies seek to describe each OGP state's higher education environment and to provide an overview of how data and information are currently used to inform statewide policies, with special focus on MOA's productivity agenda.

MOA advocates three priorities for the higher-education productivity agenda:

1. recasting state finance systems to reward institutions for graduating students, not just enrolling them
2. increasing the efficiency and cost-effectiveness of academic programs and administrative operations
3. aligning resources or creating new models to serve more students

Tennessee's OGP Proposal

Tennessee's participation in the Opportunity Grant Program (OGP) is aligned with the state's goal of increasing postsecondary degree production by proposing several change strategies in light of the following challenges:

- deficits relative to other states in the educational attainment level of Tennessee's working-age adult population
- significant and enduring gaps in successful participation in postsecondary education
- affordability concerns
- a constrained fiscal outlook for state government

The proposal outlines Tennessee's fiscal and academic policy strengths as well as levers for change. Challenges identified in the OGP proposal include a lack of clarity among institutions about the goals in the current Master Plan. There is also a potential mismatch between workforce skills needed in rural Tennessee, which comprises much of the state, where more undergraduate degrees are not called for and reports of a shortage of associate degree holders are common.

The overarching goal for MOA-TN is specific: by 2015, the end of the state's next five-year master planning cycle for higher education, Tennessee wants to be equal to the average for Southern states in the percentage of working-age adults holding associate degrees or higher. Beyond that, the goal is to reach the national average. Currently, 29.9% of the state's working-age adults meet that standard as compared with 34.3% in Southern states and 37.2% nationally. To meet the goal set by 2015 will require a doubling of the current number of graduates, or an additional 140,000 per year.

Tennessee proposes a number of activities planned for the year including convening groups of stakeholders. These groups include:

- *Policy Audit*, *Strategy Groups* comprised of:
  - Funding Mechanism Group
  - Academic and Student Affairs Policy Group
  - Adult Students Group
  - Efficiency Group
  - Master Plan Group
- *Research Studies* comprised of:
  - Affordability Study
  - Delta Project White Paper on Postsecondary Costs

When the Planning Year is completed, policy sustainability will be feasible through existing mechanisms such as the Master Plan, the Master Plan Update, and Performance Funding.

I. MOA Agenda: Recast State Finance Systems to Reward Institutions for Graduating Students, Not Just Enrolling Them

Tuition and Fees

The public colleges and universities in Tennessee are considered to be relatively affordable at the undergraduate level. The largest gap between Tennessee's public sector institutions and national averages for tuition and fee charges is at the research university level. Master's level institutions and community colleges are lower than national averages, but the gap is much narrower. Family income needed to pay for college, 26%, is below the national average of 30.7%. Nearly a quarter of family income, 23.4%, is needed to pay for tuition and fees at Tennessee's community colleges for families at the lowest income quintile.

Student Financial Aid

Despite overall lower tuition and fees, a higher percentage of Tennessee students receive Pell grants than the national average, 41.6% compared with 35.5%. This is a result of lower average incomes across the state than the nation. In recent years, the state *HOPE Scholarship,* which is based on academic excellence, has contributed substantially to scholarships available to Tennesseans. These funds are primarily non-need based. As a consequence, as of 2006 - 2007, 4.6% of state appropriations went to need-based aid versus 14.1% to non-need based aid. This compares with 7.6% for need-based aid nationally versus 3.0% for non-need based aid. The policy goal of this program is to encourage the state's high school students to perform better prior to postsecondary study so that they will be better prepared and more likely to be successful

in further study. The awards are provided regardless of family income by the *HOPE Scholarship*, along with the supplemental *ASPIRE Award* that is based on income. These programs are funded by the state's lottery.

State Budgeting

As of the end of December 2008, Tennessee's year-to-date tax collections were $407.8 million less than the budgeted estimate. The general fund was under-collected by $379.4 million and other major fund categories were under-collected by $28.4 million. Given that there is a constitutional requirement to have a balanced budget, such a gap must be closed, requiring budgetary adjustments in the upcoming session of the General Legislative Assembly.

Tennessee's budget process mirrors other states with one or two notable exceptions. It is on an annual budget cycle with a fiscal year beginning July 1. A majority vote of the legislature is required to pass the budget. The budget agency is in the Finance Department. One of the more unusual aspects of the process is that the revenue estimates come from a body external to state government per se, the *Center for Business Education and Research* at the University of Tennessee. The governor has line item veto authority. By constitutional authority, the budget that is signed must be a balanced one.

Higher Education Budgeting

The support for financing higher education in Tennessee appears to have been close to the national averages in recent years, if not somewhat higher. For instance, in 2007 the educational appropriations per *Full-Time Equivalent* (FTE) student were $7,651, over $900 per FTE above the national average of $6,773 for that year. Recent increases in state support likewise have been towards the middle of national averages ranking 22nd from 2006-07 to 2007-08 at 8.6% and 18th from 2005-06 to 2007-08 at 17.0%. Tuition revenues are modeled at the *Tennessee Higher Education Commission* and are transmitted to the systems of higher education as recommendations. The boards of the two state higher education systems ultimately set tuition levels.

Tennessee was the first state in the nation to implement and maintain a successful performance-based funding program based on student academic achievement. Since 1979, institutions can receive up to 5.45% above their base budgets based on their performance on five standards listed below. Additionally, the public higher education funding formula embeds fiscal incentives for productivity gains, such as student retention and enrollment of non-traditional students at community colleges.

The policy initiatives in Tennessee are reflected in the *State Master Plan* process. Currently, the higher education system is in the 2005 - 2010 Performance Funding Cycle whose five standards are:

Standard One – Student Learning Environment and Outcomes

- 1A Student Learning – General Education
- 1B Student Learning – Major Field Assessment
- 1C Accreditation and Program Review

Standard Two – Student Satisfaction

Standard Three – Student Persistence

Standard Four – State Master Plan Priorities
- 4A Institutional Strategic Planning Goals
- 4B State Strategic Planning Goals
- 4C Articulation and Transfer
- 4D Job Placement

Standard Five – Assessment Outcomes
- Assessment Pilot
- Assessment Implementation

Assessment activities to generate data for each of these standards are required annually. Reports are due to the *Tennessee Higher Education Commission* (THEC) on an annual basis as well. The data standards are quite stringent. For example, for Standard 1A Student Learning – General Education, only the test results from certain approved tests are acceptable as evidence of student learning. Results from other tests are only permitted if there are national norms to show that they are nationally accepted and valid measures of student learning, and then only if approved by the independent governing board overseeing the Performance Funding process. Similar measures are in place for each of the standards to insure objectivity and openness. Future state policy initiatives likely will be incorporated via the Performance Planning process and especially via Standard Four, State Master Plan Priorities.

New budgeting initiatives. Tennessee is discussing emphasizing student success more prominently in its funding strategies. At present, institutions receive formula funds based on the number of students enrolled on the 14th day of class in a given semester. Consideration is being given to allocating funds based on how many students were enrolled at the end of that same semester.

Cost Data and Studies

The *Tennessee Higher Education Commission* (THEC) makes its funding request of the legislature based, in part, on cost data received from the University of Tennessee and the Tennessee Board of Regents. These data are used by THEC for comparative analysis prior to making recommendations about statewide tuition. The recent release of cost data by the *Delta Project on Postsecondary Education Costs, Productivity, and Accountability* provides a statewide glimpse of higher education costs in Tennessee.

Institutional costs. Higher education and related expenses per Full-Time Equivalent (FTE) student in Tennessee vary by level. In 2006, total education and related expenses at public research universities was $14,655 per FTE, slightly above the national average. Expenditures per FTE at Tennessee's community colleges, in contrast, were significantly below the national figure, $7,229 compared with $9,037, respectively.

Student costs. Between 2002 and 2006, the student share of costs at research universities increased 5.0%. Community college student share of these costs during this time increased 8.0%. Students at Tennessee's research universities bear 43% of the total cost of their attendance compared with 51% nationally. Conversely, community college students bear 42% of their cost compared with the national figure of 31%.

Instructional costs. Where available, instructional cost data are analyzed and reported at the campus level.

II. MOA Agenda: Increase Efficiency and Cost Effectiveness of Academic Programs and Administrative Operations

Tennessee's relatively longer history of public accountability translates into deep learning about efficiency and effectiveness issues, especially as efficiency and effectiveness issues are tied to dollars. The *Tennessee Higher Education Commission* (THEC) collects more than forty accountability measures. Generally speaking, matters of efficiency are handled at the Board of Regents and University of Tennessee levels. Matters of effectiveness are handled at the THEC level.

Higher Education Efficiency

Tennessee is caught in the same economic downturn experienced across the country, making higher education efficiency and cost-savings a priority. Mid-year budget reduction proposals are being considered including employee furloughs and revised provisions for assessing tuition rates for full-time students. Other efficiencies have also surfaced, including changes in instructional delivery, the possibility of letting advanced students teach beginners, and tuition discounts for students in various forms of online learning modalities.

Higher Education Effectiveness

All of the outcomes measures within Tennessee's performance funding are closely associated with effectiveness. Tennessee is one of a handful of states to require common statewide examinations for all public colleges and universities. Tennessee, requires "rising juniors," i.e., those moving from sophomore to junior year, to pass a nationally-developed examination of basic skills.

Degree costs. The Delta Project recently calculated a rough measure of Tennessee's higher education productivity. In 2006, the aggregate education and related spending per student completion at Tennessee's research universities was $65,600[1], significantly higher than the corresponding national average cost of $56,300, and significantly higher among community colleges at $43,019. Tennessee's cost for community college completion is nearly the same as the national average.

[1] To facilitate comparisons, all dollar figures are rounded to the nearest $100.

III. MOA Agenda: Align Resources or Create New Models to Serve More Students

Historically, Tennessee has been in or near the bottom fifth of the states economically and in the middle to bottom quarter of the states in terms of educational achievement. In recent years, a number of initiatives have been introduced in an effort to encourage student achievement, resulting in a higher percentage of undergraduate and advanced degrees. Performance Funding and the *HOPE Scholarship* program are probably the best-known examples of such initiatives and are prime examples of how the state has aligned its resources to achieve policy objectives in the area of higher education.

Higher Education, Policy Environment, and Data Capacity

Political Environment

Democratic Governor Phil Bredesen, the former mayor of Nashville, began serving his second term as governor in January 2007 after winning all 95 counties in Tennessee, reportedly the first governor to do that in over 100 years. Major themes of his administration have been accountability, open government, and support of education as the number one priority of the state. Regarding education, much of his policy focus has been on teacher pay and Pre-K and K-12 initiatives.

Tennessee voted for John McCain for president in 2008 by a wide margin, 57% compared with 42% nationally. Republican Lamar Alexander was re-elected to the Senate, where he joins another Republican Senator, Bob Corker. The U.S. House of Representative members from Tennessee are five Democrats and four Republicans. The state also bucked the national trend electing a majority of Republicans to both houses of the state legislature for the first time since Reconstruction with a split in the state House of Representatives of 50 to 49 and in the Senate 19 to 14.

While it is obvious that legislative leadership positions such as the Speaker of the House would naturally change with the shift in balance in power as a result of the fall 2008 elections, in Tennessee there are also a number of Executive Branch positions which are elected by the House and Senate members which will now likely change. The lieutenant governor, for example, is elected by a majority of the 33 members of the State Senate. Likewise, the Secretary of State, Comptroller, and State Treasurer are elected by the joint session of the state Senate and House of Representatives, which totals 132 members. Of these five offices only one, that of the lieutenant governor, is currently held by a Republican. This mix is likely to change in the near future.

What impact these legislative and administrative changes will have upon higher education policy and budgeting remains to be seen, but it is reasonable to assume that such large changes are likely to have some impact. One immediate change is predictable. The Secretary of State, Comptroller, and Treasurer all serve *ex officio* as members of the *Tennessee Higher Education Commission*.

Organization of Higher Education

The *Tennessee Higher Education Commission* (THEC) was created in 1967 by the Tennessee General Assembly to coordinate higher education in the state. The Commission coordinates two systems of higher education, the University of Tennessee institutions governed by the University of Tennessee Board of Trustees, and the state universities, community colleges, technical institutes and technology centers governed by the Tennessee Board of Regents. There are currently nine public universities, two special purpose institutes, 13 two-year institutions, and 27 technology centers in Tennessee that serve nearly 200,000 students.

The Commission is comprised of nine lay members, with six-year terms, representing congressional districts of the state; three Constitutional Officers who are ex-officio voting members, the Comptroller of the Treasury, the State Treasurer, and the Secretary of State; two ex-officio student members; and the Executive Director of the State Board of Education, as an ex-officio non-voting member.

As part of its coordinating role, THEC is statutorily required to create a master plan for the development of public higher education in Tennessee. The published mission for Tennessee's twenty-first century system of higher education is to:

- elevate the overall education attainment of citizens in the State through increased accessibility to mission-focused institutions, which deliver educational services on campus, as well as through a planned network of off-campus instruction
- prepare citizens responsibly for success in the new century by providing high-quality teaching and research in an environment that serves the needs of its consumers

The independent colleges and universities of Tennessee are represented at the state level by the *Tennessee Independent College and University Association* (TICUA). It has 36 members representing 66,500 students and seeks the preservation of opportunity and choice for students in higher education within the state as one of its major goals. It represents a wide range of institutions from Vanderbilt, a comprehensive research university, to specialized schools such as Meharry Medical College and Middle Tennessee School of Anesthesia, to more traditional liberal arts colleges such as Aquinas and Rhodes Colleges.

Data Systems

The student data systems at THEC have been in existence for approximately 30 years The systems represent a mix of data drawn from the Board of Regents, which includes the community colleges, and the University of Tennessee systems among the public institutions. In addition, there are data on the 70% to 80% of the in-state students attending private not-for-profit colleges and universities who are eligible for the lottery-supported HOPE scholarship program. All of the institutions have their own student databases that meet the minimum needs common to THEC while including data elements that are beyond those requirements of THEC. Within this agency, there are other databases that must be linked to the student records from time to time, namely the academic program inventory and the off-campus locations. In addition, there is a need to link to the Tennessee Student Assistance Corporation, the student aid agency that handles the Hope and other scholarship and state loan programs. Besides this scholarship agency,

there is also data sharing that takes place with the K-12 education system on an intermittent basis and with the State Economist on a regular basis as part of manpower planning.

Enrollment modeling. A new student flow model has been developed to simulate changes in assumptions at key decision points. It focuses on student subgroups that may be affected by policy decisions such as adults, those requiring remediation, dual enrollment, and out-of-state students as well as institutional sectors.

Other State Context

Demographics

One in five Tennesseans is a member of a minority group, with nearly a fourth under age 18. The high school dropout rate is slightly below the national average. The high school graduation projections for the state between 2000 and 2020 are for an increase of approximately 15%, but the ethnic make-up of those graduates is predicted to change significantly, with Caucasians declining by over a fifth during this period. Given the differential college going rates of these groups, this could have an impact on the postsecondary attendance patterns in the state during this period.

Income and State Economics

The state per capita income during the last decade has been between 88% and 90% of the national average and ranked 39th out of the 50 states in 2007 at $33,280. At the same time, however, the cost of living is relatively low and is estimated at 10% below the national average for 14 Tennessee cities. In November 2008, unemployment in the state was at 6.9%, near the national average of 6.7%.

Workforce

Several of the general areas identified as high growth industries by the *Tennessee Department of Labor and Workforce Development* require postsecondary education. Among these are administrative and support services; educational services; ambulatory health care services; and professional, scientific, and technical services. Many of the individual positions requiring advanced education are rated as excellent or very good in terms of job outlook. This includes those requiring traditional academic degrees, such as elementary and secondary teaching and accounting, and those requiring applied associate degrees and/or vocational training such as mechanical specialists and medical laboratory technicians.

K-12 Demographics

Enrollments of K-12 students have approached 1 million during the last ten years with the estimated change from 2000 to 2007 being nearly 56,000 or 6.1%. The increase by race is primarily in terms of minorities; Caucasians are decreasing in number and in proportion of enrollments and graduates of the K-12 system.

Educational Attainment

While education attainment among adults has increased over the past decade, the state still lags the national average for percentage of high school graduates by 3.4% and college graduates by 4.9%. Progress is being made in educational attainment. As of 2008, 83.2% of adults were high school graduates, an increase of 6.3% over the prior ten years. The 24.5% of adults who were college graduates represented an increase of 7.6% during the prior decade. Thirteen percent of Tennessee's adults lack prose literacy, a statistic that is near the national proportion of 14%. Prose literacy varies widely throughout Tennessee, however. For example, in Williamson County, which is part of the Nashville metropolitan area, the rate is 9.0%. Meanwhile, in more rural Haywood County, in the western part of the state, 25% of adults lack prose literacy skills.

Preparation for College

Average ACT scores in 2008 offer one potentially encouraging sign at the state level. In a state with 88% of the graduates taking the test, a far higher percentage than the 43% national average, the Average Composite Score of 21 is right at the national average. Normally a higher percentage of students taking the test biases the scores downward. Likewise, the average English, mathematics, reading, and science sub-scores are all within plus-or-minus a point of the national averages. These are good signs for the K-12 system that graduated the students who took the ACT tests as well as the institutions of postsecondary education enrolling them.

Participation Rates in Higher Education

Higher education enrollment in the state increased by 7.3% from 2000 to 2005 compared with 14.2% nationally, but the growth was quite uneven by sector. Private colleges and universities grew by 34.7% compared with the national growth rate of 25.5%. Public institutions actually declined by 1.1% during the same period as opposed to a national growth rate of 10.8%. Fast growth in the private sector at the national and state levels undoubtedly was affected by the growth in the for-profit sector, including those for-profit institutions delivering programs on-line. The impact in Tennessee of the portable *HOPE Scholarship* and *ASPIRE Awards* programs may also help to explain part of the disproportionate growth of the private versus public sectors in the state, since they target funding to students and not institutions.

The participation rate of low-income students in higher education in Tennessee is slightly below the national average at 21.6% compared with 23.8% nationally. That represents a substantial improvement since 1993, however, when the participation rate in the state was a much lower, 16.5% compared with a national average 24.3%. Tennessee has been improving in this area over the past 15 years while the rest of the nation on average is doing slightly worse.

Higher Education Enrollment

Compared nationally, Tennessee's public higher education enrollment is concentrated at the research university level, 44% compared with 28%. Community colleges in Tennessee enroll proportionately fewer students compared with national enrollment patterns, 36% compared with 48%.

Overall enrollment growth patterns from 2000 to 2005 reveal show growth in the private sector from 61,400 to 82,700[2] and a decline in the public sector from 202,500 to 200,400. Tennessee is a net importer of undergraduate students as of 2006, with 2,300 more new freshmen coming into the state than leaving it.

Transfer

In 2006 - 2007, a total of 4,400 students transferred from Tennessee community colleges to public four-year colleges and universities.

Degrees Awarded

In 2006 – 2007, the total number of undergraduate degrees awarded in the state was 26,845. There were 1,450 first-professional degrees, 9,031 master's degrees, and 1,040 doctorates. The fastest growing category of degree was the doctorate, having grown from 737 in 2002 – 2003, or over 41% in just four years. The proportions of degrees produced by private institutions in the state were relatively high: 37% at the undergraduate level; 45% at the first professional level; 43% at the master's level; and 40% at the doctoral level.

Conclusions

The higher education system at the state level in Tennessee at this time is in a seemingly contradictory situation. It has one of the oldest and most stable accountability systems in the country with objective measures. It is both transparent and flexible enough to accommodate new initiatives. The governor is in his second term and was re-elected with a majority from every county in the state. At first glance, this is a description of a very stable situation, even in the face of difficult budget challenges faced by nearly every state at this time.

The November election, however, has shifted the political environment at the state level in a way that leaves matters unpredictable not only in the legislative branch but also in the executive branch of state government, including the board of the Tennessee Commission of Higher Education. As a result of the election, there will be a Republican majority in both houses of the state legislature for the first time since Reconstruction, which will mean that the Democratic governor is very likely to be working with not only a Republican House and Senate but also a Republican lieutenant governor, Comptroller, Treasurer, and Secretary of State. The last three individuals, assuming that they will be replaced, will become members of the board of the *Tennessee Higher Education Commission* in addition to having, one assumes, roles in setting higher education policy in the state. Whether there will be major changes in direction of higher education policy is a question that is unanswered at this point.

[2] To facilitate comparisons, dollar figures are rounded to the nearest $100.

Research Contributors

A team of researchers with extensive experiences working with and in state systems of higher education compiled these mini case studies. Team members were:

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Dr. John A. Muffo was the director of academic assessment at the Virginia Polytechnic Institute and State University. He also has served in research capacities at the Ohio Board of Regents, the Indiana Commission for Higher Education, Cleveland State University, and the University of Illinois at Urbana Champaign. Dr. Muffo is past president of the Association for Institutional Research.

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Workforce Data

Tennessee's Fastest Growing Occupations, Top 25 Jobs to the Year 2016

Rank	Occupation	Employment 2006	Employment 2016	Percent Change	Total Openings
1	Court reporters	170	300	72%	130
2	Pharmacy technicians	7,970	12,540	57%	4,570
3	Environmental engineers	900	1,410	56%	510
4	Umpires, referees, and other sports officials	140	220	55%	80
5	Network systems and data communications analysts	2,810	4,340	54%	1,530
6	Motorboat mechanics	380	590	53%	210
7	Fence erectors	490	730	48%	240
8	Orthotists and prosthetists	230	330	45%	100
9	Home health aides	10,760	15,610	45%	4,850
10	Animal trainers	730	1,040	43%	310
11	Pharmacists	5,640	7,960	41%	2,320
12	Ship engineers	140	200	40%	60
13	Marriage and family therapists	480	680	40%	200
14	Computer software engineers, applications	3,310	4,630	40%	1,320
15	Paralegals and legal assistants	3,730	5,180	39%	1,450
16	Financial analysts	2,220	3,080	38%	860
17	Motorcycle mechanics	520	710	37%	190
18	Substance abuse and behavioral disorder counselors	1,280	1,750	37%	470
19	Personal financial advisors	1,440	1,980	37%	540
20	Personal and home care aides	12,310	16,850	37%	4,540
21	Mobile heavy equipment mechanics, except engines	2,670	3,650	37%	980
22	Medical assistants	9,220	12,600	37%	3,380
23	Mental health and substance abuse social workers	2,830	3,860	37%	1,030
24	Veterinary technologists and technicians	1,160	1,580	36%	420
25	Veterinarians	1,140	1,560	36%	420

Note: Table contains occupations for all levels of education and training
Source: http://www.careerinfonet.org Retrieved January 16, 2009

Comparative Data Links And Sources For OGP States

Organization of Higher Education

Data

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